

추가 문제

소스 코드

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## C++14

```

1 #include <iostream>
2 using namespace std;
3 char a[33][33];
4 int dx[] = {0,0,1,-1};
5 int dy[] = {1,-1,0,0};
6 int n, m;
7 bool ok(int x, int y) {
8     return 0 <= x && x < n && 0 <= y && y < m;
9 }
10 int go(int x, int y, int cnt) {
11     int ans = -1;
12     if (cnt == 0) {
13         return 0;
14     }
15     for (int k=0; k<4; k++) {
16         int nx = x+dx[k];
17         int ny = y+dy[k];
18         while (ok(nx, ny) && a[nx][ny] == '.') {
19             a[nx][ny] = '#';
20             cnt--;
21             nx += dx[k];
22             ny += dy[k];
23         }
24         nx -= dx[k];
25         ny -= dy[k];
26         if (!(x == nx && y == ny)) {
27             int temp = go(nx, ny, cnt);
28             if (temp != -1) {
29                 if (ans == -1 || ans > temp) {
30                     ans = temp;
31                 }
32             }
33         }
34         while (!(x == nx && y == ny)) {
35             a[nx][ny] = '.';
36             cnt++;
37             nx -= dx[k];
38             ny -= dy[k];
39         }
40     }
41     return ans;
42 }
43 int main() {
44     int tc = 1;
45     while (cin >> n >> m) {
46         int cnt = 0;
47         for (int i=0; i<n; i++) {
48             cin >> a[i];
49             for (int j=0; j<m; j++) {
50                 if (a[i][j] == '.') {
51                     cnt++;
52                 }
53             }
54         }
55         int ans = -1;
56         for (int i=0; i<n; i++) {
57             for (int j=0; j<m; j++) {
58                 if (a[i][j] == '.') {
59                     a[i][j] = '#';
60                     int temp = go(i, j, cnt-1);
61                     if (temp != -1) {
62                         if (ans == -1 || ans > temp) {
63                             ans = temp;
64                         }
65                     }
66                     a[i][j] = '.';
67                 }
68             }
69         }
70         cout << "Case " << tc << ": " << ans << '\n';
71         tc++;
72     }
73     return 0;
74 }

```

결과	메모리	시간	코드 길이
맞았습니다!!	1988 KB	120 ms	1896 B

Java

```

1 import java.util.*;
2 public class Main {
3     static char[][] a;
4     static final int[] dx = {0,0,1,-1};
5     static final int[] dy = {1,-1,0,0};
6     static int n, m;
7     static boolean ok(int x, int y) {
8         return 0 <= x && x < n && 0 <= y && y < m;
9     }
10    static int go(int x, int y, int cnt) {
11        int ans = -1;
12        if (cnt == 0) {
13            return 0;
14        }
15        for (int k=0; k<4; k++) {
16            int nx = x+dx[k];
17            int ny = y+dy[k];
18            while (ok(nx, ny) && a[nx][ny] == '.') {
19                a[nx][ny] = '#';
20                cnt -= 1;
21                nx += dx[k];
22                ny += dy[k];
23            }
24            nx -= dx[k];
25            ny -= dy[k];
26            if (!(x == nx && y == ny)) {
27                int temp = go(nx, ny, cnt);
28                if (temp != -1) {
29                    if (ans == -1 || ans > temp+1) {
30                        ans = temp+1;
31                    }
32                }
33            }
34            while (!(x == nx && y == ny)) {
35                a[nx][ny] = '.';
36                cnt += 1;
37                nx -= dx[k];
38                ny -= dy[k];
39            }
40        }
41        return ans;
42    }
43    public static void main(String[] args) {
44        Scanner sc = new Scanner(System.in);
45        int tc = 1;
46        while (sc.hasNextInt()) {
47            n = sc.nextInt();
48            m = sc.nextInt();
49            a = new char[n][m];
50            int cnt = 0;
51            for (int i=0; i<n; i++) {
52                a[i] = sc.next().toCharArray();
53                for (int j=0; j<m; j++) {
54                    if (a[i][j] == '.') {
55                        cnt += 1;
56                    }
57                }
58            }
59            int ans = -1;
60            for (int i=0; i<n; i++) {
61                for (int j=0; j<m; j++) {
62                    if (a[i][j] == '.') {
63                        a[i][j] = '#';
64                        int temp = go(i, j, cnt-1);
65                        if (temp != -1) {
66                            if (ans == -1 || ans > temp) {
67                                ans = temp;
68                            }
69                        }
70                        a[i][j] = '.';
71                    }
72                }
73            }
74            System.out.printf("Case %d: %d\n", tc, ans);
75            tc += 1;
76        }
77    }
78 }

```

결과	메모리	시간	코드 길이
맞았습니다!!	15404 KB	384 ms	2409 B

## C++14

```
1 #include <iostream>
2 using namespace std;
3 int bottom[40001];
4 bool hole[40001];
5 int top[40001];
6 int main() {
7     for (int i=0; i<=40000; i++) {
8         bottom[i] = -1;
9         hole[i] = false;
10    }
11    int n;
12    cin >> n;
13    n -= 2;
14    n /= 2;
15    int x, y;
16    cin >> x >> y;
17    for (int i=0; i<n; i++) {
18        int x1, y1, x2, y2;
19        cin >> x1 >> y1 >> x2 >> y2;
20        for (int j=x1+1; j<=x2; j++) {
21            if (bottom[j] == -1 || bottom[j] < y1) {
22                bottom[j] = y1;
23            }
24        }
25    }
26    cin >> x >> y;
27    int m;
28    cin >> m;
29    while (m-->0) {
30        int x1, y1, x2, y2;
31        cin >> x1 >> y1 >> x2 >> y2;
32        for (int i=x1+1; i<=x2; i++) {
33            hole[i] = true;
34        }
35    }
36    for (int i=1; i<=40000; i++) {
37        if (bottom[i] == -1) continue;
38        if (hole[i] == false) continue;
39        int surface = bottom[i];
40        for (int j=i; j>=1; j--) {
41            if (bottom[j] == -1) break;
42            surface = min(surface, bottom[j]);
43            top[j] = max(top[j], surface);
44        }
45        surface = bottom[i];
46        for (int j=i+1; j<=40000; j++) {
47            if (bottom[j] == -1) break;
48            surface = min(surface, bottom[j]);
49            top[j] = max(top[j], surface);
50        }
51    }
52    long long ans = 0;
53    for (int i=1; i<=40000; i++) {
54        if (bottom[i] == -1) continue;
55        if (bottom[i] > top[i]) {
56            ans += bottom[i] - top[i];
57        }
58    }
59    cout << ans << '\n';
60    return 0;
61 }
```

결과

메모리

시간

코드 길이

맞았습니다!!

2340 KB

1736 ms

1564 B

## Java

```
1 import java.util.*;
2 public class Main {
3     static int[] bottom = new int[40001];
4     static boolean[] hole = new boolean[40001];
5     static int[] top = new int[40001];
6     public static void main(String[] args) {
7         Scanner sc = new Scanner(System.in);
8         Arrays.fill(bottom, -1);
9         Arrays.fill(hole, false);
10        int n = sc.nextInt();
11        n -= 2;
12        n /= 2;
13        sc.nextInt(); sc.nextInt();
14        for (int i=0; i<n; i++) {
15            int x1 = sc.nextInt();
16            int y1 = sc.nextInt();
17            int x2 = sc.nextInt();
18            int y2 = sc.nextInt();
19            for (int j=x1+1; j<=x2; j++) {
20                if (bottom[j] == -1 || bottom[j] < y1) {
21                    bottom[j] = y1;
22                }
23            }
24        }
25        sc.nextInt(); sc.nextInt();
26        int m = sc.nextInt();
27        while (m-->0) {
28            int x1 = sc.nextInt();
29            int y1 = sc.nextInt();
30            int x2 = sc.nextInt();
31            int y2 = sc.nextInt();
32            for (int i=x1+1; i<=x2; i++) {
33                hole[i] = true;
34            }
35        }
36        for (int i=1; i<=40000; i++) {
37            if (bottom[i] == -1) continue;
38            if (hole[i] == false) continue;
39            int surface = bottom[i];
40            for (int j=i; j>=1; j--) {
41                if (bottom[j] == -1) break;
42                surface = Math.min(surface, bottom[j]);
43                top[j] = Math.max(top[j], surface);
44            }
45            surface = bottom[i];
46            for (int j=i+1; j<=40000; j++) {
47                if (bottom[j] == -1) break;
48                surface = Math.min(surface, bottom[j]);
49                top[j] = Math.max(top[j], surface);
50            }
51        }
52        long ans = 0;
53        for (int i=1; i<=40000; i++) {
54            if (bottom[i] == -1) continue;
55            if (bottom[i] > top[i]) {
56                ans += bottom[i] - top[i];
57            }
58        }
59        System.out.println(ans);
60    }
61 }
```

결과

메모리

시간

코드 길이

맞았습니다!!

32968 KB

2200 ms

2040 B



C++14

```
1 #include <iostream>
2 #include <map>
3 #include <vector>
4 using namespace std;
5 int main() {
6     int n;
7     cin >> n;
8     n -= 2;
9     n /= 2;
10    vector<int> bottom(n, -1);
11    vector<bool> hole(n, false);
12    vector<int> top(n, 0);
13    vector<int> width(n, 0);
14    map<int,int> dict;
15    int x, y;
16    cin >> x >> y;
17    for (int i=0; i<n; i++) {
18        int x1, y1, x2, y2;
19        cin >> x1 >> y1 >> x2 >> y2;
20        bottom[i] = y1;
21        width[i] = (x2-x1);
22        dict[x2] = i;
23    }
24    cin >> x >> y;
25    int m;
26    cin >> m;
27    for (int i=0; i<n; i++) {
28        int x1, y1, x2, y2;
29        cin >> x1 >> y1 >> x2 >> y2;
30        int index = dict[x2];
31        hole[index] = true;
32    }
33    for (int i=0; i<n; i++) {
34        if (hole[i] == false) continue;
35        int surface = bottom[i];
36        for (int j=i; j>=0; j--) {
37            surface = min(surface, bottom[j]);
38            top[j] = max(top[j], surface);
39        }
40        surface = bottom[i];
41        for (int j=i+1; j<n; j++) {
42            surface = min(surface, bottom[j]);
43            top[j] = max(top[j], surface);
44        }
45    }
46    long long ans = 0;
47    for (int i=0; i<n; i++) {
48        if (bottom[i] > top[i]) {
49            ans += (long long)(bottom[i] - top[i]) * width[i];
50        }
51    }
52    cout << ans << '\n';
53    return 0;
54 }
55
```

결과	메모리	시간	코드 길이
맞았습니다!!	2124 KB	16 ms	1360 B

Java

```
1 import java.util.*;
2 public class Main {
3     public static void main(String[] args) {
4         Scanner sc = new Scanner(System.in);
5         int n = sc.nextInt();
6         n -= 2;
7         n /= 2;
8         int[] bottom = new int[n];
9         Arrays.fill(bottom,-1);
10        boolean[] hole = new boolean[n];
11        int[] top = new int[n];
12        int[] width = new int[n];
13        HashMap<Integer,Integer> dict = new HashMap<>();
14        sc.nextInt(); sc.nextInt();
15        for (int i=0; i<n; i++) {
16            int x1 = sc.nextInt();
17            int y1 = sc.nextInt();
18            int x2 = sc.nextInt();
19            int y2 = sc.nextInt();
20            bottom[i] = y1;
21            width[i] = (x2-x1);
22            dict.put(x2,i);
23        }
24        sc.nextInt(); sc.nextInt();
25        int m = sc.nextInt();
26        for (int i=0; i<m; i++) {
27            int x1 = sc.nextInt();
28            int y1 = sc.nextInt();
29            int x2 = sc.nextInt();
30            int y2 = sc.nextInt();
31            int index = dict.get(x2);
32            hole[index] = true;
33        }
34        for (int i=0; i<n; i++) {
35            if (hole[i] == false) continue;
36            int surface = bottom[i];
37            for (int j=i; j>=0; j--) {
38                surface = Math.min(surface, bottom[j]);
39                top[j] = Math.max(top[j], surface);
40            }
41            surface = bottom[i];
42            for (int j=i+1; j<n; j++) {
43                surface = Math.min(surface, bottom[j]);
44                top[j] = Math.max(top[j], surface);
45            }
46        }
47        long ans = 0;
48        for (int i=0; i<n; i++) {
49            if (bottom[i] > top[i]) {
50                ans += (long)(bottom[i] - top[i]) * width[i];
51            }
52        }
53        System.out.println(ans);
54    }
55 }
56
```

결과	메모리	시간	코드 길이
맞았습니다!!	31884 KB	468 ms	1808 B



## C++14

```
1 #include <iostream>
2 #include <cstring>
3 #include <tuple>
4 using namespace std;
5 int a[10][10];
6 bool c[10][10];
7 bool c2[10][10];
8 bool c3[10][10];
9 bool domino[10][10];
10 int n=9;
11 int dx[] = {0, 1};
12 int dy[] = {1, 0};
13 pair<int,int> convert(string s) {
14     return make_pair(s[0]-'A',s[1]-'1');
15 }
16 int square(int x, int y) {
17     return (x/3)*3+(y/3);
18 }
19 bool can(int x, int y, int num) {
20     return c[x][num] == false && c2[y][num] == false && c3[square(x,y)][num] == false;
21 }
22 void check(int x, int y, int num, bool what) {
23     c[x][num] = what;
24     c2[y][num] = what;
25     c3[square(x,y)][num] = what;
26 }
27 bool check_range(int x, int y) {
28     return 0 <= x && x < n && 0 <= y && y < n;
29 }
30 bool go(int z) {
31     if (z == 81) {
32         for (int i=0; i<n; i++) {
33             for (int j=0; j<n; j++) {
34                 cout << a[i][j];
35             }
36             cout << '\n';
37         }
38         return true;
39     }
40     int x = z/n;
41     int y = z%n;
42     if (a[x][y] != 0) {
43         return go(z+1);
44     } else {
45         for (int k=0; k<2; k++) {
46             int nx = x+dx[k];
47             int ny = y+dy[k];
48             if (!check_range(nx,ny)) {
49                 continue;
50             }
51             if (a[nx][ny] != 0) continue;
52             for (int i=1; i<=9; i++) {
53                 for (int j=1; j<=9; j++) {
54                     if (i == j) continue;
55                     if (domino[i][j]) continue;
56                     if (can(x,y,i) && can(nx,ny,j)) {
57                         check(x,y,i,true);
58                         check(nx,ny,j,true);
59                         domino[i][j] = domino[j][i] = true;
60                         a[x][y] = i;
61                         a[nx][ny] = j;
62                         if (go(z+1)) {
63                             return true;
64                         }
65                         check(x,y,i,false);
66                         check(nx,ny,j,false);
67                         domino[i][j] = domino[j][i] = false;
68                         a[x][y] = 0;
69                         a[nx][ny] = 0;
70                     }
71                 }
72             }
73         }
74     }
75     return false;
76 }
77 int main() {
78     int tc=1;
79     while (true) {
80         memset(c,false,sizeof(c));
81         memset(c2,false,sizeof(c2));
82         memset(c3,false,sizeof(c3));
83         memset(domino,false,sizeof(domino));
84         memset(a,0,sizeof(a));
85         int m;
86         cin >> m;
87         if (m == 0) break;
88         for (int i=0; i<m; i++) {
89             int n1, n2;
90             string s1, s2;
91             cin >> n1 >> s1 >> n2 >> s2;
92             int x1,y1,x2,y2;
93             tie(x1,y1) = convert(s1);
94             tie(x2,y2) = convert(s2);
95             a[x1][y1] = n1;
96             a[x2][y2] = n2;
97             domino[n1][n2] = domino[n2][n1] = true;
98             check(x1,y1,n1,true);
99             check(x2,y2,n2,true);
100         }
101         for (int i=1; i<=9; i++) {
102             string s;
103             cin >> s;
104             int x,y;
105             tie(x,y) = convert(s);
106             a[x][y] = i;
107             check(x,y,i,true);
108         }
109         cout << "Puzzle " << tc << '\n';
110         go(0);
111         tc += 1;
112     }
113     return 0;
114 }
115 }
```

결과	메모리	시간	코드 길이
맞았습니다!!	1992 KB	4 ms	3193 B

## Java

```
1 import java.util.*;
2 public class Main {
3     static int[][] a = new int[10][10];
4     static boolean[][] c = new boolean[10][10];
5     static boolean[][] c2 = new boolean[10][10];
6     static boolean[][] c3 = new boolean[10][10];
7     static boolean[][] domino = new boolean[10][10];
8     static final int n = 9;
9     static final int[] dx = {0, 1};
10    static final int[] dy = {1, 0};
11    static int square(int x, int y) {
12        return (x/3)*3+(y/3);
13    }
14    static boolean can(int x, int y, int num) {
15        return c[x][num] == false && c2[y][num] == false && c3[square(x,y)][num] ==
false;
16    }
17    static void check(int x, int y, int num, boolean what) {
18        c[x][num] = what;
19        c2[y][num] = what;
20        c3[square(x,y)][num] = what;
21    }
22    static boolean check_range(int x, int y) {
23        return 0 <= x && x < n && 0 <= y && y < n;
24    }
25    static boolean go(int z) {
26        if (z == 81) {
27            for (int i=0; i<n; i++) {
28                for (int j=0; j<n; j++) {
29                    System.out.print(a[i][j]);
30                }
31                System.out.println();
32            }
33            return true;
34        }
35        int x = z/n;
36        int y = z%n;
37        if (a[x][y] != 0) {
38            return go(z+1);
39        } else {
40            for (int k=0; k<2; k++) {
41                int nx = x+dx[k];
42                int ny = y+dy[k];
43                if (!check_range(nx,ny)) {
44                    continue;
45                }
46                if (a[nx][ny] != 0) continue;
47                for (int i=1; i<=9; i++) {
48                    for (int j=1; j<=9; j++) {
49                        if (i == j) continue;
50                        if (domino[i][j]) continue;
51                        if (can(x,y,i) && can(nx,ny,j)) {
52                            check(x,y,i,true);
53                            check(nx,ny,j,true);
54                            domino[i][j] = domino[j][i] = true;
55                            a[x][y] = i;
56                            a[nx][ny] = j;
57                            if (go(z+1)) {
58                                return true;
59                            }
60                            check(x,y,i,false);
61                            check(nx,ny,j,false);
62                            domino[i][j] = domino[j][i] = false;
63                            a[x][y] = 0;
64                            a[nx][ny] = 0;
65                        }
66                    }
67                }
68            }
69        }
70        return false;
71    }
72    public static void main(String[] args) {
73        Scanner sc = new Scanner(System.in);
74        int tc=1;
75        while (true) {
76            for (int i=0; i<10; i++) {
77                Arrays.fill(c[i], false);
78                Arrays.fill(c2[i], false);
79                Arrays.fill(c3[i], false);
80                Arrays.fill(domino[i], false);
81                Arrays.fill(a[i], 0);
82            }
83            int m = sc.nextInt();
84            if (m == 0) break;
85            for (int i=0; i<m; i++) {
86                int n1 = sc.nextInt();
87                String s1 = sc.next();
88                int n2 = sc.nextInt();
89                String s2 = sc.next();
90                int x1 = s1.charAt(0) - 'A';
91                int y1 = s1.charAt(1) - '1';
92                int x2 = s2.charAt(0) - 'A';
93                int y2 = s2.charAt(1) - '1';
94                a[x1][y1] = n1;
95                a[x2][y2] = n2;
96                domino[n1][n2] = domino[n2][n1] = true;
97                check(x1,y1,n1,true);
98                check(x2,y2,n2,true);
99            }
100            for (int i=1; i<=9; i++) {
101                String s = sc.next();
102                int x = s.charAt(0) - 'A';
103                int y = s.charAt(1) - '1';
104                a[x][y] = i;
105                check(x,y,i,true);
106            }
107            System.out.println("Puzzle " + tc);
108            go(0);
109            tc += 1;
110        }
111    }
112 }
113 }
```

결과	메모리	시간	코드 길이
맞았습니다!!	14416 KB	168 ms	3981 B

C++14

```
1 #include <iostream>
2 #include <algorithm>
3 using namespace std;
4 int n;
5 int a[500][500];
6 int d[500][500];
7 int dx[] = {0,0,1,-1};
8 int dy[] = {1,-1,0,0};
9 int go(int i, int j) {
10     if (i < 0 || j < 0 || i >= n || j >= n) {
11         return 0;
12     }
13     if (d[i][j] != 0) {
14         return d[i][j];
15     }
16     d[i][j] = 1;
17     for (int k=0; k<4; k++) {
18         int x = i+dx[k];
19         int y = j+dy[k];
20         if (a[i][j] < a[x][y]) {
21             d[i][j] = max(d[i][j], go(x, y) + 1);
22         }
23     }
24     return d[i][j];
25 }
26
27 int main() {
28     cin >> n;
29     for (int i=0; i<n; i++) {
30         for (int j=0; j<n; j++) {
31             cin >> a[i][j];
32         }
33     }
34     int ans = 0;
35     for (int i=0; i<n; i++) {
36         for (int j=0; j<n; j++) {
37             ans = max(ans, go(i, j));
38         }
39     }
40     cout << ans << '\n';
41     return 0;
42 }
43
```

결과	메모리	시간	코드 길이
맞았습니다!!	19440 KB	104 ms	868 B

Java

```
1 import java.util.*;
2 public class Main {
3     static int n;
4     static int[][] a = new int[500][500];
5     static int[][] d = new int[500][500];
6     static int[] dx = {0,0,1,-1};
7     static int[] dy = {1,-1,0,0};
8     static int go(int i, int j) {
9         if (d[i][j] != 0) {
10             return d[i][j];
11         }
12         d[i][j] = 1;
13         for (int k=0; k<4; k++) {
14             int x = i+dx[k];
15             int y = j+dy[k];
16             if (x < 0 || x >= n || y < 0 || y >= n) continue;
17             if (a[i][j] < a[x][y]) {
18                 d[i][j] = Math.max(d[i][j], go(x, y) + 1);
19             }
20         }
21         return d[i][j];
22     }
23     public static void main(String args[]) {
24         Scanner sc = new Scanner(System.in);
25         n = sc.nextInt();
26         for (int i=0; i<n; i++) {
27             for (int j=0; j<n; j++) {
28                 a[i][j] = sc.nextInt();
29             }
30         }
31         int ans = 0;
32         for (int i=0; i<n; i++) {
33             for (int j=0; j<n; j++) {
34                 ans = Math.max(ans, go(i, j));
35             }
36         }
37         System.out.println(ans);
38     }
39 }
40
```

결과	메모리	시간	코드 길이
맞았습니다!!	106028 KB	1444 ms	1131 B



C++14

```
1 #include <iostream>
2 #include <algorithm>
3 using namespace std;
4 struct Element {
5     int row, col, val;
6 };
7 bool cmp(const Element &u, const Element &v) {
8     return u.val > v.val;
9 }
10 int a[500][500];
11 Element b[500*500];
12 int d[500][500];
13 int dx[] = {0,0,1,-1};
14 int dy[] = {1,-1,0,0};
15 int main() {
16     int n;
17     cin >> n;
18     for (int i=0; i<n; i++) {
19         for (int j=0; j<n; j++) {
20             cin >> a[i][j];
21             b[i*n+j].row = i;
22             b[i*n+j].col = j;
23             b[i*n+j].val = a[i][j];
24         }
25     }
26     sort(b,b+n*n,cmp);
27     for (int i=0; i<n*n; i++) {
28         int x = b[i].row;
29         int y = b[i].col;
30         d[x][y] = 1;
31         // (x, y) -> (nx, ny)
32         for (int k=0; k<4; k++) {
33             int nx = x+dx[k];
34             int ny = y+dy[k];
35             if (nx < 0 || nx >= n || ny < 0 || ny >= n) continue;
36             if (a[x][y] < a[nx][ny]) {
37                 d[x][y] = max(d[x][y], d[nx][ny]+1);
38             }
39         }
40     }
41     int ans = 0;
42     for (int i=0; i<n; i++) {
43         for (int j=0; j<n; j++) {
44             if (ans < d[i][j]) {
45                 ans = d[i][j];
46             }
47         }
48     }
49     cout << ans << '\n';
50     return 0;
51 }
```

결과	메모리	시간	코드 길이
맞았습니다!!	6872 KB	120 ms	1226 B

Java

```
1 import java.util.*;
2 class Element implements Comparable<Element> {
3     int row, col, val;
4     Element(int row, int col, int val) {
5         this.row = row;
6         this.col = col;
7         this.val = val;
8     }
9     public int compareTo(Element that) {
10         if (this.val > that.val) return -1;
11         else if (this.val < that.val) return 1;
12         else return 0;
13     }
14 }
15 public class Main {
16     static int[] dx = {0,0,1,-1};
17     static int[] dy = {1,-1,0,0};
18     public static void main(String[] args) {
19         Scanner sc = new Scanner(System.in);
20         int n = sc.nextInt();
21         int[][] a = new int[n][n];
22         Element[] b = new Element[n*n];
23         for (int i=0; i<n; i++) {
24             for (int j=0; j<n; j++) {
25                 a[i][j] = sc.nextInt();
26                 b[i*n+j] = new Element(i,j,a[i][j]);
27             }
28         }
29         Arrays.sort(b,0,n*n);
30         int[][] d = new int[n][n];
31         for (int i=0; i<n*n; i++) {
32             int x = b[i].row;
33             int y = b[i].col;
34             d[x][y] = 1;
35             // (x, y) -> (nx, ny)
36             for (int k=0; k<4; k++) {
37                 int nx = x+dx[k];
38                 int ny = y+dy[k];
39                 if (nx < 0 || nx >= n || ny < 0 || ny >= n) continue;
40                 if (a[x][y] < a[nx][ny]) {
41                     d[x][y] = Math.max(d[x][y],d[nx][ny]+1);
42                 }
43             }
44         }
45         int ans = 0;
46         for (int i=0; i<n; i++) {
47             for (int j=0; j<n; j++) {
48                 if (ans < d[i][j]) {
49                     ans = d[i][j];
50                 }
51             }
52         }
53         System.out.println(ans);
54     }
55 }
```

결과	메모리	시간	코드 길이
맞았습니다!!	96544 KB	1828 ms	1688 B

C++14

```
1 #include <iostream>
2 #include <vector>
3 #include <algorithm>
4 using namespace std;
5 int check(vector<string> &a) {
6     int n = a.size();
7     int ans = 1;
8     for (int i=0; i<n; i++) {
9         int cnt = 1;
10        for (int j=1; j<n; j++) {
11            if (a[i][j] == a[i][j-1]) {
12                cnt += 1;
13            } else {
14                cnt = 1;
15            }
16            if (ans < cnt) ans = cnt;
17        }
18        cnt = 1;
19        for (int j=1; j<n; j++) {
20            if (a[j][i] == a[j-1][i]) {
21                cnt += 1;
22            } else {
23                cnt = 1;
24            }
25            if (ans < cnt) ans = cnt;
26        }
27    }
28    return ans;
29 }
30 int main() {
31     int n;
32     cin >> n;
33     vector<string> a(n);
34     for (int i=0; i<n; i++) {
35         cin >> a[i];
36     }
37     int ans = 0;
38     for (int i=0; i<n; i++) {
39         for (int j=0; j<n; j++) {
40             if (j+1 < n) {
41                 swap(a[i][j], a[i][j+1]);
42                 int temp = check(a);
43                 if (ans < temp) ans = temp;
44                 swap(a[i][j], a[i][j+1]);
45             }
46             if (i+1 < n) {
47                 swap(a[i][j], a[i+1][j]);
48                 int temp = check(a);
49                 if (ans < temp) ans = temp;
50                 swap(a[i][j], a[i+1][j]);
51             }
52         }
53     }
54     cout << ans << '\n';
55     return 0;
56 }
57
```

결과	메모리	시간	코드 길이
맞았습니다!!	1988 KB	24 ms	1384 B

Java

```
1 import java.util.*;
2 public class Main {
3     static int check(char[][] a) {
4         int n = a.length;
5         int ans = 1;
6         for (int i=0; i<n; i++) {
7             int cnt = 1;
8             for (int j=1; j<n; j++) {
9                 if (a[i][j] == a[i][j-1]) {
10                    cnt += 1;
11                } else {
12                    cnt = 1;
13                }
14                if (ans < cnt) ans = cnt;
15            }
16            cnt = 1;
17            for (int j=1; j<n; j++) {
18                if (a[j][i] == a[j-1][i]) {
19                    cnt += 1;
20                } else {
21                    cnt = 1;
22                }
23                if (ans < cnt) ans = cnt;
24            }
25        }
26        return ans;
27    }
28    public static void main(String[] args) {
29        Scanner sc = new Scanner(System.in);
30        int n = sc.nextInt();
31        char[][] a = new char[n][n];
32        for (int i=0; i<n; i++) {
33            a[i] = sc.next().toCharArray();
34        }
35        int ans = 0;
36        for (int i=0; i<n; i++) {
37            for (int j=0; j<n; j++) {
38                if (j+1 < n) {
39                    char t = a[i][j]; a[i][j] = a[i][j+1]; a[i][j+1] = t;
40                    int temp = check(a);
41                    if (ans < temp) ans = temp;
42                    t = a[i][j]; a[i][j] = a[i][j+1]; a[i][j+1] = t;
43                }
44                if (i+1 < n) {
45                    char t = a[i][j]; a[i][j] = a[i+1][j]; a[i+1][j] = t;
46                    int temp = check(a);
47                    if (ans < temp) ans = temp;
48                    t = a[i][j]; a[i][j] = a[i+1][j]; a[i+1][j] = t;
49                }
50            }
51        }
52        System.out.println(ans);
53    }
54 }
55
```

결과	메모리	시간	코드 길이
맞았습니다!!	12020 KB	180 ms	1737 B



C++14

```
1 #include <iostream>
2 #include <algorithm>
3 using namespace std;
4 int a[1002][1002];
5 int d[1002][1002][3];
6 const int inf = 100000000;
7 int main() {
8     int n, m;
9     cin >> n >> m;
10    for (int i=1; i<=n; i++) {
11        for (int j=1; j<=m; j++) {
12            cin >> a[i][j];
13        }
14    }
15    fill(&d[0][0][0], &d[1001][1001][2]+1, -inf);
16    d[1][1][1] = a[1][1];
17    for (int j=2; j<=m; j++) {
18        d[1][j][1] = d[1][j-1][1] + a[1][j];
19    }
20    for (int i=2; i<=n; i++) {
21        for (int j=1; j<=m; j++) {
22            d[i][j][0] = max({d[i-1][j][0], d[i-1][j][1], d[i-1][j][2]}) + a[i][j];
23            d[i][j][1] = max(d[i][j-1][0], d[i][j-1][1]) + a[i][j];
24        }
25        for (int j=m; j>=1; j--) {
26            d[i][j][2] = max(d[i][j+1][0], d[i][j+1][2]) + a[i][j];
27        }
28    }
29    cout << max({d[n][m][0], d[n][m][1], d[n][m][2]}) << '\n';
30    return 0;
31 }
32
```

결과

메모리

시간

코드 길이

맞았습니다!!	17676 KB	228 ms	901 B
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Java

```
1 import java.util.*;
2 public class Main {
3     static int[][] a = new int[1002][1002];
4     static int[][][] d = new int[1002][1002][3];
5     static int inf = 100000000;
6     public static void main(String args[]) {
7         Scanner sc = new Scanner(System.in);
8         int n = sc.nextInt();
9         int m = sc.nextInt();
10        for (int i=1; i<=n; i++) {
11            for (int j=1; j<=m; j++) {
12                a[i][j] = sc.nextInt();
13            }
14        }
15        for (int i=0; i<1002; i++) {
16            for (int j=0; j<1002; j++) {
17                for (int k=0; k<3; k++) {
18                    d[i][j][k] = -inf;
19                }
20            }
21        }
22        d[1][1][1] = a[1][1];
23        for (int j=2; j<=m; j++) {
24            d[1][j][1] = d[1][j-1][1] + a[1][j];
25        }
26        for (int i=2; i<=n; i++) {
27            for (int j=1; j<=m; j++) {
28                d[i][j][0] = Math.max(d[i-1][j][0], Math.max(d[i-1][j][1], d[i-1][j][2]))
+ a[i][j];
29                d[i][j][1] = Math.max(d[i][j-1][0], d[i][j-1][1]) + a[i][j];
30            }
31            for (int j=m; j>=1; j--) {
32                d[i][j][2] = Math.max(d[i][j+1][0], d[i][j+1][2]) + a[i][j];
33            }
34        }
35        System.out.println(Math.max(d[n][m][0],Math.max(d[n][m][1],d[n][m][2])));
36    }
37 }
38
39
```

결과

메모리

시간

코드 길이

맞았습니다!!	203496 KB	1516 ms	1313 B
---------	-----------	---------	--------

C++14

```
1 #include <cstdio>
2 #include <algorithm>
3 #include <iostream>
4 using namespace std;
5 int a[1001][1001];
6 int d[1001][1001];
7 int main() {
8     int n,m;
9     scanf("%d %d",&n,&m);
10    for (int i=1; i<=n; i++) {
11        for (int j=1; j<=m; j++) {
12            scanf("%1d",&a[i][j]);
13        }
14    }
15    int ans = 0;
16    for (int i=1; i<=n; i++) {
17        for (int j=1; j<=m; j++) {
18            if (a[i][j] == 0) {
19                continue;
20            }
21            d[i][j] = min({d[i-1][j-1], d[i-1][j], d[i][j-1]}) + 1;
22            if (ans < d[i][j]) {
23                ans = d[i][j];
24            }
25        }
26    }
27    cout << ans*ans << '\n';
28    return 0;
29 }
30
```

결과	메모리	시간	코드 길이
맞았습니다!!	9816 KB	84 ms	678 B

Java

```
1 import java.util.*;
2 public class Main {
3     public static void main(String args[]) {
4         Scanner sc = new Scanner(System.in);
5         int n = sc.nextInt();
6         int m = sc.nextInt();
7         int[][] a = new int[n+1][m+1];
8         int[][] d = new int[n+1][m+1];
9         for (int i=1; i<=n; i++) {
10             String s = sc.next();
11             for (int j=1; j<=m; j++) {
12                 a[i][j] = s.charAt(j-1)-'0';
13             }
14         }
15         int ans = 0;
16         for (int i=1; i<=n; i++) {
17             for (int j=1; j<=m; j++) {
18                 if (a[i][j] == 0) {
19                     continue;
20                 }
21                 d[i][j] = Math.min(Math.min(d[i-1][j-1], d[i-1][j]), d[i][j-1]) + 1;
22                 if (ans < d[i][j]) {
23                     ans = d[i][j];
24                 }
25             }
26         }
27         System.out.println(ans*ans);
28     }
29 }
30
```

결과	메모리	시간	코드 길이
맞았습니다!!	28884 KB	412 ms	897 B



끝

---

# 코드 플러스

<https://code.plus>

- 슬라이드에 포함된 소스 코드를 보려면 "정보 수정 > 백준 온라인 저지 연동"을 통해 연동한 다음, "백준 온라인 저지"에 로그인해야 합니다.
- 강의 내용에 대한 질문은 코드 플러스의 "질문 게시판"에서 할 수 있습니다.
- 문제와 소스 코드는 슬라이드에 첨부된 링크를 통해서 볼 수 있으며, "백준 온라인 저지"에서 서비스됩니다.
- 슬라이드와 동영상 강의는 코드 플러스 사이트를 통해서만 볼 수 있으며, 동영상 강의의 녹화와 다운로드, 배포와 유통은 저작권법에 의해서 금지되어 있습니다.
- 다른 경로로 이 슬라이드나 동영상 강의를 본 경우에는 [codeplus@startlink.io](mailto:codeplus@startlink.io) 로 이메일 보내주세요.
- 강의 내용, 동영상 강의, 슬라이드, 첨부되어 있는 소스 코드의 저작권은 스타트링크와 최백준에게 있습니다.